

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Bad Boy Buggies

Mississippi Technology Alliance

Bad Boy Enterprises Increases Production with Lean

Client Profile:

Bad Boy Enterprises (BBE) is a four-wheel drive, electric vehicle manufacturer located in Natchez, Mississippi. BBE has established a national brand name, Bad Boy Buggies, and is well known in the 'hunting vehicle' industry. The company employs 45 people.

Situation:

BBE launched the XT version of their electric buggy. As a result of the model launch, production throughput was significantly lower than was required to keep pace with sales. Faced with a growing sales backlog, senior management's immediate priority was to increase the XT's production rate. The Mississippi Technology Alliance (MEP.ms), a NIST MEP network affiliate, was contacted as a result of an initial meeting between BBE and representatives from the Mississippi Development Authority (MDA), to address the company's throughput struggles.

Solution:

The MEP.ms quick response plan was accepted by BBE's senior management team. In parallel, opportunities surfaced for stakeholders to partner with BBE in the project. Entergy, the electric utility serving BBE, agreed to participate as a sponsor in the early work, as did the Mississippi Development Authority. The first project focused on rapidly identifying and dealing with production bottlenecks on the shop floor. After experiencing early successes, several additional follow-on projects were initiated. The initial work on the XT buggy involved redesigning the plant layout, identifying and redesigning workstations, which were inhibiting an increased production rate. This activity involved introducing the company to basic principles of Lean manufacturing. Specific work involved improved product flow, additional tooling requirements, developing process and quality documentation, implementing 5S (Sort, Set in Order, Shine, Standardize, Sustain), and implementing visual management at each workstation. In addition, tracking of total production was initiated throughout the workday, which provided timely focus on problems as they occurred. Detail time studies were conducted, and line balancing was implemented, so that production flow was streamlined. Quality problems were identified and tracked back to the source. Also, production supervisors were coached so that they moved from a fire-fighting mode into facilitating overall production flow. Finally, inventory and materials management challenges were addressed so that production line shortages, due to lack of material availability, were reduced. In addition to increasing the production on the plant floor, other areas of opportunity emerged for the MEP.ms team to assist. One of the most significant areas involved obtaining the 'self certified' street-legal version of the XT. This certification enabled the customers purchasing a Bad Boy Buggy to qualify for favorable tax incentives. Also, a simulation model of the entire plant, developed in Flexsim software, was developed to assist the company in visualizing its production process, and was used significantly in marketing efforts. As a result of MEP.ms' assistance, the company experienced production increases, improved quality, and expanded market opportunities.

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Results:

- * Increased sales by \$1 million.
- * Increased production from 5 buggies per day to 20 per day.
- * Improved quality by 90 percent.

Testimonial:

"The efforts of MEP.ms have made an invaluable impact on our business. We have been extremely pleased with the responsive support and excellent results."

John Dale & Pat Burns, Co-Owners